Arsenic MCL Stakeholder Meetings
Feb-Mar 2003

DHS Notes Summary

The following is a brief summary of comments made and issues raised at the Sacramento, Fresno and Los Angeles arsenic MCL stakeholder meetings.

Analysis

- Analytical limitations exist for arsenic. Commenter suggesting use of new method SM 3114 hydride generation that can get to 1 ppb and below. Easy to detect at lower levels; costs only $2000 to modify technique to detect down to 1 ppb; commenter cited work in New Jersey. *DHS contacted New Jersey to learn more about this---commenter was probably referring to method detection level, not the reporting level. The reporting level reflects quantitation within acceptable levels of uncertainty. The method detection level is used only to indicate presence/absence and is not usable for MCL compliance because the uncertainty associated with any quantitation is so high. New Jersey's compliance reporting level based on a survey of laboratories and methods is 3 ppb, higher than California's reporting level of 2 ppb.*
- What are the chances of a lower reporting level? *None at this time, based on the Department's interlaboratory study that clearly demonstrated that 2 ppb was the lowest level achievable with an acceptable level of uncertainty.*

MCL level

- Need to consider protection from both cancer and noncancer effects and set MCL lower than federal, e.g., 1 ppb.
- Risks are 1 cancer case in every 1500 people exposed at the reporting level of 2 ppb; this is too high. MCL needs to be as low as possible.
- State should adopt lowest MCL possible now, since MCLs take years to change.
- State should adopt federal MCL.
- Plenty of health effects data now available on which to base a low MCL.
- Where is evidence of US deaths?---all studies are in other countries. Foreign health studies are not applicable to the Ca.
- Would it be acceptable for population to be exposed to levels exceeding the MCL for some portion of the year? e.g., $\leq$ 3 months/ year?

Treatment and residual disposal

Treatment

- POU treatment should be acceptable; shouldn't have to treat all the water since only 1% of water is used for drinking.
- Access to homes for POU treatment depends on how homeowner is approached---e.g., system can threaten to turn off the water.
- Grimes POU demo project appears to be going well, but there are still some unanswered questions.

- New technologies may be more cost-effective, but not necessarily below a certain level and perhaps not for waste disposal. Feasibility of lower MCL needs to be fully addressed.
- About 25% of wells with more than 10 ppb arsenic are also contaminated with uranium---co-contamination issues; one system doing pilot studies has found vanadium in the treatment waste residuals.
- Utility commented that an FeOH filter pilot study found the media only lasted 30 days, removing both arsenic and uranium; unless the pH were changed, this would not be a feasible treatment; a pH change would increase the costs.
- Could some of emerging technologies create problems with bacteria, e.g., iron bacteria resulting in HPC problems?
- Some treatments would remove fluoride; this would undermine dental protection.
- What about black box vendors? Can these be addressed under the SRF---they're not currently covered---therefore, can't get capital costs covered.
- Finding land on which to drill a new well will be difficult for some systems and very costly for others. Need to consider land costs when looking at drilling new wells.
- Blending could work in some cases.
- Water matrix strongly affects treatment effectiveness; one utility reported that it had to use 2 different technologies to pilot test its wells.
- Suggestion that Arizona treatment info and data may not be applicable to Ca.

Residual disposal

- Presentation made by a consultant on the issue of residual disposal; that presentation will be posted on the ACWA website. *See* *http://www.acwanet.com/issues_action/waterquality/arsenic_resids_prelim.pdf*
- Treatment residual disposal will be an issue; 500 mg/kg for TTLC and 5 mg/kg for STLC could be difficult to meet.
- Might there be an evaluation of the Ca. wet test as an appropriate tool for assessing arsenic hazardous waste? No; that would be a different agency and would be unlikely at this time.
- Disposal costs also include transport, tipping; transport of hazardous waste costs 2 to 4 times nonhazardous, depending on distance.
- Only 3 hazardous waste disposal sites in Ca---where will waste go?
- Residual disposal will drive MCL revision
- Volume of residual needing to be disposed could challenge existing capacity of hazardous waste sites; might also drive up disposal costs.
- How will regional boards respond to treatment residual disposal via sewers---would require monitoring of waste disposal, perhaps banning of disposal of certain wastes.
- What happens to POU filter disposal?
- How would media backwash waters be disposed of?
- What about arsenic in sewage sludge---how would that be disposed of?

- One utility noted difficulties related to co-contamination in sources resulting in a waste with both arsenic and vanadium concentrations that couldn't pass the TLCP test and would required class 1 landfill disposal.
- Due to waste disposal issues, utility ends up with 'cradle to grave" liability.
- Utility tells DHS to not depend on EPA data on waste disposal, treatment and costs--does not reflect Ca issues.

Exemptions

- State will allow exemptions, but will use federal criteria and guidance; may not be necessary to obtain an exemption if system works with Dept to establish compliance schedule and proceeds on a timely basis. *Exemptions don't have any benefit except that a consumer cannot sue the utility.*

Costs

- An MCL of 2 ppb should not cost any more to address than an MCL of 10 ppb
- Need to protect health regardless of cost
- Need to consider "real world"
- Need to make certain arsenic mitigation efforts are sustainable.
- EPA assumed the waste would be nonhazardous, but that will not be the case in Ca; affects costs.
- 10 ppb MCL is already devastating to small water systems---more stringent would not be ok
- Need to consider affordability criteria---also consider big picture with all the other regs.
- Need to consider financial implications of need for higher level of water treatment operator (more costly) for arsenic treatment---also availability of operators.
- Potential impact on Cal/Fed process, i.e., if MCL were set as low as 5 ppb, 50% of the water banking/storage options would be eliminated – this is also a cost.
- State should do comparative cost analysis; include percentage of water supply that would be affected.
- Utilities doing treatment studies stated that they would provide study data to DHS.
- Cost analysis needs to be comprehensive and take costs to household level.
- Utility found that its customers did not receive well the idea of paying less than $50/month extra per service connection to reduce arsenic to less than 50 ppb.
- One system noted that at 10 ppb, 10 of its 25 wells were impacted; at 5 ppb, 87% of system would be off-line; requested phased in compliance if MCL<10 ppb
- Another system noted that at 5 ppb, it would have 4 wells affected for an estimated $12 million; at 2 ppb, 12 wells for an estimated $45 million would be affected; system population of 41,000 would have to pay.
- Another system noted the number of its wells that would be impacted at different MCLs: 53 wells at 2 ppb, 16 at 3 ppb, 8 at 5 ppb, and 6 at 10 ppb. Noted that there would be significant costs to minority and poor populations.

Funding for treatment

- Need to provide $ for outreach and education for small water systems.
- Use Proposition 50 funds to address arsenic treatment; may be up to $10 million available for small water system grants for treatment, including arsenic, under Chap 4; under Chap 6, there may be $ for pilot and demonstration treatment studies. There'll probably be about $15 million in all for small systems; DHS will be seeking proposals for this money, but won't be giving any out until next year. Some Prop 50 money will be needed for the state revolving fund match to obtain the federal funds.
- DHS has been encouraging utilities to apply for State Revolving Fund monies as soon as possible
- RE: Alpaugh---DHS will contact DWR about application of funding in Costa bill---does it apply only to distribution systems? Legislation appeared to allow for broader applications, e.g., new well. Is 90 ppb As considered an emergency?
- Utility in situation of pending acceptance of SRF funding for well drilling for compliance with uranium MCL; a lower arsenic MCL would indicate that a different approach would be more appropriate due to co-contamination issues; this is a dilemma.

Operators

- Would it be possible to certify Spanish-speaking operators---would increase availability of operators for small water systems. *DHS has not looked at that yet, but will consider it.*
- Concern that there won't be enough T2, T3 and T5 operators to meet demand.

Reg process

- When does DHS expect to have MCL package ready? *Should have a draft posted on the Drinking Water Program website by the end of the year.*

Misc

- Need information for the public to explain the bigger picture related to cancer, arsenic, drinking water and public health protection. Need to educate public regarding risk at levels above the public health goals.
- Need to consider how to get greatest benefit in terms of public health for public expenditures---that may be additional water treatment, but it might be some other public health effort.
- This is an environmental justice issue because mainly poor people are affected. As a health and safety issue, cost should be irrelevant related to small water systems.
- DHS needs to rethink its strategy towards aspiring for the highest level of health protection.
- Suggestion made that DHS adopt 10 ppb now and revisit in 5 years when there is more data on emerging technologies, residual disposal, and costs.
- Last 4 water bonds were sold because public is concerned about safe water; public is willing to pay.
- Residents of one town in San Bernadino are not willing to pay even $50 extra a month per service connection.
- Compliance monitoring could be an issue related to lab certification.

- Utilities need to rethink their strategies for addressing the multiple constituents, i.e., set priorities; arsenic should be a major recipient of funding.
- Would DHS allow variances for an MCL <10 ppb if there were "no affordable technologies"? *(EPA does not allow variances for 10 ppb MCL)*
- Has there been any study on contributing geological factors to arsenic depositions or concentrations? *Not really*.